

**CLAIMS:****WHAT IS CLAIMED IS:**

1. A discharge device, which comprises a plurality of discharge electrodes and a  
 5 counter electrode facing the plurality of discharge electrodes, for causing a streamer  
 discharge to be initiated between both the electrodes by applying a cyclically varying  
 voltage to both the electrodes from electric power supply means, wherein: the following  
 relational expression is satisfied:

$$f_v \geq f_s$$

10 where ( $f_v$ ) is the frequency of the voltage which is applied to both the electrodes and ( $f_s$ ) is  
 the frequency of the streamer discharge which is generated, in the form of a pulse, between  
 both the electrodes.

2. The discharge device of claim 1, wherein:

15 if  $k = 40[\text{mm/kHz}]$ , the following relational expression is satisfied:

$$f_v \geq k/G$$

where ( $f_v$ )[kHz] is the frequency of the voltage which is applied to both the electrodes and  
 (G)[mm] is the distance between both the electrodes.

20 3. The discharge device of claim 1 or claim 2, wherein:

the following relational expression is satisfied:

$$f_v \geq 20[\text{kHz}]$$

where ( $f_v$ )[kHz] is the frequency of the voltage which is applied to both the electrodes.

25 4. The discharge device of one of claims 1-3, wherein:

the following relational expression is satisfied:

$$V_{p-p} \leq 0.1 \times V_a$$

where ( $V_a$ ) and ( $V_{p-p}$ ) are, respectively, the average voltage and the amplitude for the

voltage which is applied to both the electrodes.

5. An air purification device, which comprises a discharge device for causing a streamer discharged to be initiated between a discharge electrode and a counter electrode, for purifying air to be treated by distributing the air to be treated between both the electrodes, wherein:

the aforesaid discharge device is any one of the discharge devices as set forth in claims 1-4.

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